

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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Chair
Commissioner
Commissioner
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In the Matter of Northern States Power
Company d/b/a Xcel Energy's Petition for
Approval of the 2005 Review of Nuclear Plant
Decommissioning

ISSUE DATE: March 23, 2006

DOCKET NO. E-002/M-05-1648

ORDER SETTING END-OF-LIFE DATES
AND OTHER GUIDELINES FOR NUCLEAR
DECOMMISSIONING ACCRUAL

PROCEDURAL HISTORY

On October 11, 2005, Northern States Power d/b/a Xcel Energy (Xcel or the Company) filed its triennial review of the projected costs of decommissioning its Monticello and Prairie Island Units 1 and 2 nuclear power plants.

On December 23, 2005, the Department of Commerce (the Department) filed comments.

On January 3, 2006, Xcel filed reply comments.

The matter came before the Commission on March 7, 2006.

FINDINGS AND CONCLUSIONS

I. Background

The purpose of the nuclear decommissioning review proceeding is to ensure that the amount of money collected annually over the life of the nuclear power plant's operations is sufficient at the time of the plant shutdown to cover the costs of decommissioning the facilities. The Commission conducts these reviews triennially to ensure that costs are estimated as accurately as possible and that the fund is growing at the rate necessary to cover the eventual costs of decommissioning.

II. External Fund

Nuclear Regulatory Commission (NRC) regulations require external funding to be available when nuclear operations cease. The regulations restrict withdrawals from an external decommissioning fund to only decommissioning costs until all such costs have been satisfied. Thus, no matter how over-funded the external fund may be, the excess monies in the external fund cannot be returned to ratepayers until such time as decommissioning is complete.

In order to prevent inequities among ratepayers, Xcel proposed that the Commission approve an alternative external trust account for the annual accrual. This alternative trust account would allow for greater flexibility and an earlier return of excess monies to ratepayers in the event that the collected funds are no longer needed for decommissioning.

The Department also recognized the increasing potential of over-funding the decommissioning trust, and generally supported the concept of an alternative deposit system. The Department raised concerns, however, that reasonable assurances be put into place such that the accrued funds can be protected to meet the objectives sought.

III. Decommissioning Issues

A. Nuclear Regulatory Commission Cost Estimate

The Nuclear Regulatory Commission (NRC) sets a minimum cost calculation relevant for decommissioning purposes. Xcel stated that the calculation can be done using two different waste burial assumptions: the “blended burial option” or the “direct burial option.”

According to the NRC’s source for the blended and direct burial options,¹ it is left to licensees to determine whether the direct burial option or blended burial option best represents their particular situation. Xcel selected the direct burial option for estimating the burial component of the escalation factor.

The Department’s review showed that Xcel’s cost estimates were sufficient under the “blended burial option,” but lagged somewhat under the “direct burial option.” The Department did not pursue issues arising from the choice of burial options, however, and recommended that the Commission take no action regarding the NRC estimates based on the following:

- the NRC grants licensees the choice of which burial option to use;
- the NRC estimate was significantly higher for only one unit under one option;
- the NRC estimates are based on generic formulas rather the site-specific studies;
- in Docket E-002/M-96-1201, the Commission ordered a deferral of any adjustment to account for the NRC minimum to allow events to develop;
- the potential exists for license extension at Xcel’s Monticello reactor; and
- the NRC is fully capable of enforcing its own decommissioning cost estimates and rules.

¹ NUREG-1307, Rev.11.

B. Cost Escalation Rate

The calculation of the correct escalation rate to translate Xcel's decommissioning cost estimate from 2005 dollars into future dollars is necessary to determine the overall decommissioning estimate. Xcel amended and refined the method it has previously used to calculate the escalation rate,² to one utilizing Xcel specific information.³

Xcel's method disaggregated decommissioning costs into five separate categories, and selected the appropriate inflation estimate for each category:

- 1) Labor, 57 percent of total costs;
- 2) Materials and equipment, 17 percent of total costs;
- 3) Energy, 2 percent of total costs;
- 4) Burial, 12 percent of total costs; and
- 5) Other, 12 percent of total costs.

Xcel utilized the Employment Cost Index (ECI) to calculate the inflation rate for the Labor and Other categories. Xcel clarified that the main reason for the reduction in the escalation rate - from 4.19 percent to 3.61 percent - was this change.⁴

The Department agreed with Xcel's method of determining the cost escalation rate and conclusion to utilize a 3.61 percent cost escalation rate.

C. Interest Rate on External Accounts

The earnings rate is applied to the invested decommissioning funds to estimate the funds already available for decommissioning and to estimate the interest income that will be earned on the funds until they are actually expended on decommissioning costs.

Xcel recommended an earnings rate calculation of 5.4 percent, slightly less than the 5.5 percent approved by the Commission in the 1999 decommissioning filing. The Department concurred with this calculation.

² In the past, Xcel averaged three items to arrive its cost estimate: general inflation estimates, the NRC's method of estimating inflation, and Xcel's method for estimating inflation.

³ The Commission has previously approved use of Xcel's method of determining the escalation rate in E-002/M-02-1766.

⁴ These categories represent nearly 70 percent of the total cost.

D. Period Over Which to Accumulate Decommissioning Funds

1. Prairie Island 1 and 2

Xcel based its annual accrual of decommissioning funds over the remaining lives of the operating licenses issued by the NRC for the Prairie Island Units 1 and 2. Xcel stated its intention to operate the Prairie Island plant to the end of current NRC licenses, and asserted that it would be appropriate to base decommissioning fund accruals on the 2013 and 2014 date for Prairie Island Units 1 and 2, respectively.

The Department agreed with Xcel that 2013 and 2014 are the best dates upon which to base the annual decommissioning accrual amount for the Prairie Island Units.

2. Monticello

The Monticello plant's operating license will currently expire in 2010. In its Petition, Xcel indicated its intention to seek a 20-year extension of the operating license. Xcel asserted that there is an increasing risk of over-funding the decommissioning fund for Monticello if 2010 continued to be used in the accrual calculation and the plant life is extended 20 years.

In its Petition, Xcel proposed utilizing a "stretch out" of the Monticello decommissioning accrual period by adding four years to the 2010 end of license.

The Department recognized the inherent difficulties presented by the Monticello facility. Continuing to use 2010 as the end-of-license date could result in significant over-funding should re-licensing be approved. Alternatively, using an assumed life ending in 2030 would require an annual accrual of significantly less. Hence, if the NRC subsequently rejected the requested extension of the license, significant under-funding would result.

The Department also raised concerns about the impact the decision in this matter would have on Xcel's electric rate case, now underway. The accrual determined in this proceeding would likely be incorporated into rates in the rate case decision. Including a large accrual in rates but later finding that the life-extension is approved could lead to excess charges to ratepayers. Conversely, a small accrual included in rates could lead to significant under-recovery for Xcel if the NRC does not approve the requested end-of-license extension.

The Department recommended setting a "mid-point" life of year 2020. Xcel concurred with the Department's proposal of 2020 as the end-of-license date for Monticello.

E. Next Decommissioning Filing

The Department recommended that Xcel be required to make its next decommissioning filing on or before October 11, 2008. Xcel concurred.

The Department reviewed and found the accounting for the Statement of Financial Accounting Standards No. 143 (SFAS 143) related to decommissioning to be helpful in providing an overview of the estimated decommissioning liability and funds available to pay for decommissioning expenses in the future. The Department found that the accounting for SFAS 143 related to decommissioning was reasonable.

Finally, the Department recommended that Xcel be required to provide the most recent balance sheet accounts for SFAS 143 in the next decommissioning filing.

IV. End-of-Life Fuel Accrual

The purpose of the end-of-life fuel accrual is to recover the expense associated with the unused nuclear fuel at the time of reactor shutdowns. The end-of-life nuclear fuel accrual is held in internal funds at Xcel.

The Department reviewed Xcel's calculations and concluded that they were reasonable, assuming a shutdown of 2010. The Department, however, has recommended a life of 2020 for Monticello for decommissioning purposes. When the 2020 date is applied to the end-of-life nuclear fuel accrual, it reduces the accrual for Monticello from \$1,710,768 to \$358,358. Based on that, the Department recommended that an accrual of \$972,626 be set for Monticello and Prairie Island combined.

V. Commission Action

The parties proposed and the Commission concurs that Xcel and the Department should work together to prepare a proposed external account to submit to the Commission for its approval. Such a fund would provide the Commission with increased flexibility in establishing the decommissioning accrual and rate recovery for decommissioning.

The Commission will take no action on the NRC cost estimate, as the NRC grants licensees the choice of which burial option to use.

The Commission will set a cost escalation rate of 3.61 percent.

The Commission will approve an earnings rate on external accounts of 5.40 percent.

The Commission will set the plant end-of-life date for Monticello at 2020, for Prairie Island 1 at 2013, and for Prairie Island 2 at 2014.

In order to keep the triennial review process on track, the Commission will require Xcel to file its next review on or before October 11, 2008. The Commission will also direct Xcel to include the most recent monthly balance sheet accounts for SFAS 143.

The Commission will approve an end-of-life nuclear fuel accrual of \$972,616.

The Company and the Department have held extensive discussions, exchanged information, and ultimately resolved the remaining issues to their mutual satisfaction. The Commission finds that the resolutions reached are reasonable, consistent with the record, and in the public interest. They will be approved, as set forth below.

ORDER

1. Xcel and the Department shall work together to prepare a proposed external account to submit to the Commission for approval.
2. The Cost Escalation Rate shall be set at 3.61 percent.
3. The Earnings Rate on External Accounts shall be set at 5.40 percent.
4. The Commission hereby sets the following end-of-life dates:
 - 2020 for the Monticello plant;
 - 2013 for Prairie Island Unit 1; and
 - 2014 for Prairie Island Unit 2.
5. Xcel shall update the SFAS 143 accounting in its next decommissioning filing.
6. The Commission hereby approves an end-of-life nuclear fuel accrual of \$972,616.
7. Xcel shall make its next triennial nuclear decommissioning filing on or before October 11, 2008.
8. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Burl W. Haar
Executive Secretary

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